

REMARKS

Claims 1-11 and 14-16 are pending in this application. Claims 1-11 and 14-16 are canceled herein without prejudice. New Claims 17-29 are presented herein. Support for these new claims is found in the original claim language and throughout the specification, as set forth below. No new matter is added by the new claims and their entry is respectfully requested.

In light of these new claims and the following remarks, Applicants respectfully request reconsideration of this application and allowance of the pending claims to issue.

I. Claim 8

Claim 8, drawn to an invention nonelected with traverse, is contained in the application. Claim 8 is canceled herein without prejudice thereby addressing the Examiner's request.

II. Defective Declaration

The original declaration was objected to for failure to identify the city and either state or foreign residence of each inventor and for alterations that were not initialed or dated. *See* Final Office Action, page 2. Applicants have enclosed a new declaration with the present response, which corrects the inadvertent mistakes of the original declaration. Applicants respectfully request entry of this document.

III. Objection to the Abstract

The abstract was objected to as not being descriptive of the invention. *See* Final Office Action, page 2. The abstract has been amended by adding the sentence: "BiP levels can be increased above endogenous levels by over-expressing BiP or calreticulin." This amendment is believed to address the concerns of the Examiner, and Applicants respectfully request that the objection to the abstract be withdrawn.

IV. Rejection under 35 U.S.C. § 112, first paragraph

A. Enablement

Claims 1-7, 10-11 and 14-16 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate with the scope of the claims. *See* Final Office Action, page 3-4.

Claims 1-7, 10-11 and 14-16 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

B. Written Description

Claims 1-7, 9-10 and 14-16 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. The Final Office Action states that the claims contain subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. *See* Final Office Action, page 5.

Claims 1-7, 9-10 and 14-16 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

V. Rejection under 35 U.S.C. § 112, second paragraph

Claims 1-7, 9-11 and 14-16 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly failing to point out and distinctly claim the subject matter of the invention. *See* Final Office Action, page 5-6.

Claims 1-7, 9-11 and 14-16 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

VI. Rejection under 35 U.S.C. § 102

A. Claims 1-2 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Crofts et al. (*Plant Cell* 10:813-823, 1998). See Final Office Action, page 6-7.

Claims 1-2 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

B. Claims 1-4, 10-11 and 14-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Arora et al. (*Physiol. Planta.* 103:24-34, 1998). See Final Office Action, page 8.

Claims 1-4, 10-11 and 14-15 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

C. Claims 1-4, 10-11 and 14-15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Zhang et al. (*Protoplasma* 171:142-152, 1992). See Final Office Action, page 8.

Claims 1-4, 10-11 and 14-15 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

VII. Rejection under 35 U.S.C. § 103(a)

A. Claims 1-7, 10-11 and 14-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Crofts et al. (*Plant Cell* 10:813-823, 1998). See Final Office Action, page 9.

Claims 1-7, 10-11 and 14-15 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

B. Claims 9 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Crofts et al. (*Plant Cell* 10:813-823, 1998) and in further view of Denecke et al. (*Plant Cell* 7:391-406 (1995)). See Final Office Action, page 9-10.

Claims 9 and 16 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

C. Claims 1-4, 6, 10-11 and 14-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Coughlin et al. (U.S. Pat. No. 6,171,864). See Final Office Action, page 10.

Claims 1-4, 6, 10-11 and 14-15 are canceled herein without prejudice, thereby mooting this rejection, and Applicants respectfully request its withdrawal.

VIII. Amendments to the Specification (Examples)

Amendments were made to several of the Examples to correct clerical errors and inadvertent mistakes made when the figures were referenced.

Example 6

Example 6, page 17, lines 37 through page 18, line 1, refers to Figure 7 and is now amended to refer to Figure 6. The discussion in Example 6 concerns treatment with tunicamycin. Figure 6 illustrates tunicamycin treatment and is the correct figure to be referenced here.

Example 11

Example 11, page 20, lines 31-32 refers to Figure 10 and is now amended to refer to Figure 11. Here, the Example 11 discussion concerns induction of BiP and PR1 expression following treatment of a *saiI* mutant with salicylic acid. This is depicted in Figure 11, not in Figure 10.

Example 11, page 20 lines 34 through page 21, line 2, refers to Figure 10 and is amended to refer to Figure 7. Here, Example 11 compares BiP and PR1 expression in tobacco to that of the Arabidopsis *saiI* mutant, following treatment with salicylic acid. Figure 7 illustrates expression profiles for BiP and PR1 in tobacco in response to salicylic acid treatment. Thus, Figure 7 is the figure that should be referred to in this instance.

Example 12

Example 12, page 21, lines 19-21, refers to Figure 11 and is amended to refer to Figure 12. Example 12 discusses BiP and PR1 expression in BiP-overproducing transgenic plants as compared to wild-type plants. This is illustrated in Figure 12, not Figure 11.

Example 12, page 21, lines 21-24, refers to Figure 11 and is amended to refer to Figure 12. Here, Example 12 also compares transgenic BiP overproducing tobacco plants with wild-type plants. This is illustrated in Figure 12, not Figure 11.

Example 13

Example 13, page 21, line 35 through page 22, line 1, refers to Figure 12A and is amended to refer to Figure 13A. The reference in Example 13 is to a plasmid construct. Figure 13A depicts the plasmid construct as discussed in Example 13.

Example 13, page 22, lines 4-7, refers to Figure 12B and is amended to refer to Figure

13B. Here, Example 13 discusses the effect of tunicamycin on α -amylase and GUS activity. This is illustrated in Figure 13B.

Example 14

Example 14, page 22, lines 33-34, refers to Figure 13A and is amended to refer to Figure 14A. Example 14 discusses correlations of α -amylase activity with GUS activity which is illustrated in Figure 14 A.

Example 14, page 22, lines 35-36, refers to Figure 12 and is amended to refer to Figure 14B. Example 14 discusses PAT coexpression. This is depicted in Figure 14B and not in Figure 12.

Example 14, page 23, lines 2-5, refers to Figure 13B and is amended to refer to Figure 14B. Here, Example 14 discusses the effects of BiP overexpression and tunicamycin treatment on α -amylase activity. This is illustrated in Figure 14B and not in Figure 13B.

Example 15

Example 15, page 23, lines 11-13, refers to Figure 14 and is amended to refer to Figure 15. Example 15 discusses transcripts levels. This is illustrated in Figure 15, not in Figures 14A or 14B.

Example 15, page 23, lines 17-19, refers to Figure 12 and is amended to refer to Figure 15. Here, in Example 15 the discussion concerns the reduction in secretory protein synthesis. This is illustrated in Figure 15, not in Figure 12A or 12B. Thus, the correct figure to be referenced in this instance is Figure 15.

Example 16

Example 16, page 23, line 25-27, refers to Figure 15A and is amended to refer to Figure 16A. Example 16 discusses BiP overexpression in transgenic tobacco protoplasts and the effect of tunicamycin induced ER stress. This is illustrated in Figure 16A.

Example 16, page 23, lines 27-29, refers to Figure 15B and is amended to refer to Figure 16B. Here, Example 16 is discussing overexpression of a BiP derivative lacking an ER retention signal. Figure 16B illustrates the response of the BiP overexpressing derivative lacking an ER retention signal. Figure 15B does not exist.

IX. New Claims 17-29

New Claims 17-29 are presented herein for examination in this application and are directed toward a method of accelerating a plant's response to attack by a plant pathogen as recited therein. Support for these new claims is found in the language of the original claims and throughout the specification, as noted above, and no new matter is added by these new claims.

Applicants believe the new claims are free of the Examiner's prior rejections because these claims are directed to embodiments not deemed to be anticipated or rendered obvious by the references cited by the Examiner. Furthermore, Applicants believe the subject matter of the new claims to be patentable in view of the Declaration under 37 C.F.R. §1.132, provided by the inventor, Dr. Deneke, and submitted with this response.

Dr. Denecke states in his Declaration that one skilled in the relevant art would recognize that multiple BiPs, both plant and non-plant, were known in the art at the time the present invention was filed. He also states that a high level of functional complementation was known to exist between the BiP from these various organisms. Thus, Applicants respectfully submit that the present invention would have been enabled for BiPs other than tobacco at the time of the filing. Additionally, it is noted that the specification of the present application, on page 14, line 1-4, discloses that BiP overproduction in potatoes causes resistance to soft rot.

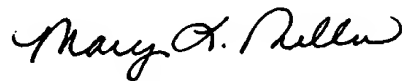
Dr. Denecke further asserts that, rather than recognizing that increased BiP levels would lead to an accelerated response to pathogen attack, one of ordinary skill in that art would have concluded from the cited reference that increased BiP levels were instead the result of infection and increased production of defense-related proteins. Accordingly, Applicants respectfully submit that new claims 17-29 are not anticipated or rendered obvious by the reference Crofts et al. (*Plant Cell* 10:813-823, 1998), and their entry and allowance is respectfully requested.

All of the issues raised in the Final Office Action are addressed herein. Applicants believe that the new claims presented herein are free of the prior art and define patentable subject matter and the allowance of these new claims is respectfully requested. The Examiner is invited and encouraged to contact the undersigned directly if such contact will expedite the prosecution of the pending claims to issue.

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A check in the amount of \$1320.00 (\$980.00 as fee for a three month extension of time and \$340.00 Notice of Appeal fee) was submitted on November 8, 2004. This amount is believed to be correct; however the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account 50-0220.

Respectfully submitted,



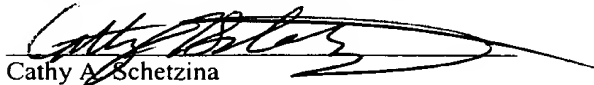
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